



SEQUENCE LISTING

<110> Lorantis Ltd.

<120> Modulations of Notch signalling for use in Immunotherapy

<130> P011073US

<140> 10/764,415

<141> 2004-07-23

<150> GB0118153.6

<151> 2001-07-01

<150> GB0207930.9

<151> 2002-04-05

<150> GB0212283.6

<151> 2002-05-28

<150> GB0212282.8

<151> 2002-05-28

<160> 40

<170> PatentIn version 3.0

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<211> 43

<212> PRT

<213> Artificial

<220>

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Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys Xaa Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30

Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
35 40

<210> 2

<211> 43

<212> PRT

<213> Artificial

<220>

<223> DSL consensus

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<223> X is any aromatic amino acid residue

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<223> X is any basic amino acid residue

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<223> X is Asp, Asn, Glu or Gln

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Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys Xaa Xaa
1 5 10 15
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
35 40

<210> 3
<211> 43
<212> PRT
<213> Artificial

<220>
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<223> X is any amino acid residue

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<222> (7)..(9)
<223> X is any amino acid residue

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<222> (11)..(13)
<223> X is any amino acid residue

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<222> (18)..(18)
<223> X is either aspartic acid or asparagine

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<223> X is any amino acid residue

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<222> (24)..(25)
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<222> (27)..(29)
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<222> (31)..(33)

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<222> (35)..(36)

<223> X is any amino acid residue

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<222> (39)..(39)

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<222> (40)..(42)

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Cys	Xaa	Xaa	Xaa	Tyr	Tyr	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Cys	Arg	Pro
1				5					10					15	

Arg	Xaa	Asp	Xaa	Phe	Gly	His	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Gly	Xaa	Xaa
			20					25					30		

Xaa	Cys	Xaa	Xaa	Gly	Trp	Xaa	Gly	Xaa	Xaa	Cys
		35					40			

<210> 4

<211> 175

<212> PRT

<213> Artificial

<220>

<223> EGF-like domain

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<222> (1)..(4)

<223> X is any amino acid

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<222> (6)..(54)

<223> X is any amino acid

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<222> (6)..(54)

<223> Any of residues 6 -52 may be present or absent

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<221> MISC_FEATURE

<222> (54)..(66)

<223> X is any amino acid

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<221> VARIANT

<222> (57)..(66)

<223> Any of residues 57-66 may be present or absent

<220>

<221> MISC_FEATURE

<222> (68)..(137)

<223> X is any amino acid

<220>

<221> VARIANT
<222> (69)..(137)
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<222> (140)..(144)
<223> Any of residues 140 - 144 may be present or absent

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<222> (150)..(170)
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<222> (150)..(170)
<223> Any of residues 150-170 may be present or absent

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<223> X is any amino acid

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<222> (175)..(175)

<223> X is any amino acid

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Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10						15	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30			
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
		35					40					45				
Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	50					55					60					
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65					70				75							80
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
				85					90					95		
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			100					105					110			
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
		115					120					125				
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	130						135				140					
Cys	Xaa	Xaa	Gly	Ala	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
145					150					155						160
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Gly	Xaa	Xaa	Cys	Xaa		
				165					170					175		

<210> 5

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<212> DNA

<213> Artificial

<220>

<223> Primer

<400> 5

gtaacccggtt gaacccatt

<210> 6
<211> 20
<212> DNA
<213> Artificial

<220>

<223> Primer

<400> 6
ccatccaatc ggtagtagcg

20

<210> 7
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<400> 7
ggtgctgata acagcggaat

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<210> 8
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atTTTTggaa tccttcacgc

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<210> 9
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<400> 9

gatctggggg gctataaaag ggggta

26

<210> 10

<211> 26

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 10

acccccgat attttcccc attcga

26

<210> 11

<211> 50

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 11

gatcccgact cgtgggaaaa tgggcggaag ggcaccgtgg gaaaatagta

50

<210> 12

<211> 50

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 12

ggctgagcac ccttttacct gccttcccgt ggcacccttt tatcatctag

50

<210> 13

<211> 21

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 13

caccccatgg ctacctgtca g

21

<210> 14

<211> 21

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 14

ggctgcacct gctgggtctg c

21

<210> 15

<211> 36

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 15

aaaggattca ccatggcacg caagcgccgg cgcagt

36

<210> 16

<211> 33

<212> DNA

<213> Artificial

<220>

<223> PCR primer

<400> 16
gcgctcgagt tacttgaacg cctccgggat gcg

33

<210> 17

<211> 800

<212> PRT

<213> Artificial

<220>

<223> Expression product

<400> 17

Met	Ala	Arg	Lys	Arg	Arg	Arg	Gln	His	Gly	Gln	Leu	Trp	Phe	Pro	Glu	
1				5					10					15		
Gly	Phe	Lys	Val	Ser	Glu	Ala	Ser	Lys	Lys	Lys	Arg	Arg	Glu	Pro	Leu	
			20					25					30			
Gly	Glu	Asp	Ser	Val	Gly	Leu	Lys	Pro	Leu	Lys	Asn	Ala	Ser	Asp	Gly	
		35					40					45				
Ala	Leu	Met	Asp	Asp	Asn	Gln	Asn	Glu	Trp	Gly	Asp	Glu	Asp	Leu	Glu	
	50					55					60					
Thr	Lys	Lys	Phe	Arg	Phe	Glu	Glu	Pro	Val	Val	Leu	Pro	Asp	Leu	Asp	
65					70					75					80	
Asp	Gln	Thr	Asp	His	Arg	Gln	Trp	Thr	Gln	Gln	His	Leu	Asp	Ala	Ala	
				85					90					95		
Asp	Leu	Arg	Met	Ser	Ala	Met	Ala	Pro	Thr	Pro	Pro	Gln	Gly	Glu	Val	
			100					105					110			
Asp	Ala	Asp	Cys	Met	Asp	Val	Asn	Val	Arg	Gly	Pro	Asp	Gly	Phe	Thr	
		115					120					125				
Pro	Leu	Met	Ile	Ala	Ser	Cys	Ser	Gly	Gly	Gly	Leu	Glu	Thr	Gly	Asn	
	130					135					140					
Ser	Glu	Glu	Glu	Glu	Asp	Ala	Pro	Ala	Val	Ile	Ser	Asp	Phe	Ile	Tyr	
145					150					155					160	
Gln	Gly	Ala	Ser	Leu	His	Asn	Gln	Thr	Asp	Arg	Thr	Gly	Glu	Thr	Ala	
				165					170					175		
Leu	His	Leu	Ala	Ala	Arg	Tyr	Ser	Arg	Ser	Asp	Ala	Ala	Lys	Arg	Leu	
			180					185					190			
Leu	Glu	Ala	Ser	Ala	Asp	Ala	Asn	Ile	Gln	Asp	Asn	Met	Gly	Arg	Thr	
		195					200					205				
Pro	Leu	His	Ala	Ala	Val	Ser	Ala	Asp	Ala	Gln	Gly	Val	Phe	Gln	Ile	
	210					215					220					
Leu	Ile	Arg	Asn	Arg	Ala	Thr	Asp	Leu	Asp	Ala	Arg	Met	His	Asp	Gly	
225					230					235					240	

Thr Thr Pro Leu Ile Leu Ala Ala Arg Leu Ala Val Glu Gly Met Leu
 245 250 255
 Glu Asp Leu Ile Asn Ser His Ala Asp Val Asn Ala Val Asp Asp Leu
 260 265 270
 Gly Lys Ser Ala Leu His Trp Ala Ala Ala Val Asn Asn Val Asp Ala
 275 280 285
 Ala Val Val Leu Leu Lys Asn Gly Ala Asn Lys Asp Met Gln Asn Asn
 290 295 300
 Arg Glu Glu Thr Pro Leu Phe Leu Ala Ala Arg Glu Gly Ser Tyr Glu
 305 310 315 320
 Thr Ala Lys Val Leu Leu Asp His Phe Ala Asn Arg Asp Ile Thr Asp
 325 330 335
 His Met Asp Arg Leu Pro Arg Asp Ile Ala Gln Glu Arg Met His His
 340 345 350
 Asp Ile Val Arg Leu Leu Asp Glu Tyr Asn Leu Val Arg Ser Pro Gln
 355 360 365
 Leu His Gly Ala Pro Leu Gly Gly Thr Pro Thr Leu Ser Pro Pro Leu
 370 375 380
 Cys Ser Pro Asn Gly Tyr Leu Gly Ser Leu Lys Pro Gly Val Gln Gly
 385 390 395 400
 Lys Lys Val Arg Lys Pro Ser Ser Lys Gly Leu Ala Cys Gly Ser Lys
 405 410 415
 Glu Ala Lys Asp Leu Lys Ala Arg Arg Lys Lys Ser Gln Asp Gly Lys
 420 425 430
 Gly Cys Leu Leu Asp Ser Ser Gly Met Leu Ser Pro Val Asp Ser Leu
 435 440 445
 Glu Ser Pro His Gly Tyr Leu Ser Asp Val Ala Ser Pro Pro Leu Leu
 450 455 460
 Pro Ser Pro Phe Gln Gln Ser Pro Ser Val Pro Leu Asn His Leu Pro
 465 470 475 480
 Gly Met Pro Asp Thr His Leu Gly Ile Gly His Leu Asn Val Ala Ala
 485 490 495
 Lys Pro Glu Met Ala Ala Leu Gly Gly Gly Gly Arg Leu Ala Phe Glu
 500 505 510
 Thr Gly Pro Pro Arg Leu Ser His Leu Pro Val Ala Ser Gly Thr Ser
 515 520 525
 Thr Val Leu Gly Ser Ser Ser Gly Gly Ala Leu Asn Phe Thr Val Gly
 530 535 540
 Gly Ser Thr Ser Leu Asn Gly Gln Cys Glu Trp Leu Ser Arg Leu Gln
 545 550 555 560
 Ser Gly Met Val Pro Asn Gln Tyr Asn Pro Leu Arg Gly Ser Val Ala
 565 570 575
 Pro Gly Pro Leu Ser Thr Gln Ala Pro Ser Leu Gln His Gly Met Val

580					585					590					
Gly	Pro	Leu	His	Ser	Ser	Leu	Ala	Ala	Ser	Ala	Leu	Ser	Gln	Met	Met
		595					600					605			
Ser	Tyr	Gln	Gly	Leu	Pro	Ser	Thr	Arg	Leu	Ala	Thr	Gln	Pro	His	Leu
	610					615					620				
Val	Gln	Thr	Gln	Gln	Val	Gln	Pro	Gln	Asn	Leu	Gln	Met	Gln	Gln	Gln
	625					630					635				640
Asn	Leu	Gln	Pro	Ala	Asn	Ile	Gln	Gln	Gln	Gln	Ser	Leu	Gln	Pro	Pro
				645					650					655	
Pro	Pro	Pro	Pro	Gln	Pro	His	Leu	Gly	Val	Ser	Ser	Ala	Ala	Ser	Gly
				660				665					670		
His	Leu	Gly	Arg	Ser	Phe	Leu	Ser	Gly	Glu	Pro	Ser	Gln	Ala	Asp	Val
		675					680					685			
Gln	Pro	Leu	Gly	Pro	Ser	Ser	Leu	Ala	Val	His	Thr	Ile	Leu	Pro	Gln
	690					695					700				
Glu	Ser	Pro	Ala	Leu	Pro	Thr	Ser	Leu	Pro	Ser	Ser	Leu	Val	Pro	Pro
	705					710					715			720	
Val	Thr	Ala	Ala	Gln	Phe	Leu	Thr	Pro	Pro	Ser	Gln	His	Ser	Tyr	Ser
				725					730					735	
Ser	Pro	Val	Asp	Asn	Thr	Pro	Ser	His	Gln	Leu	Gln	Val	Pro	Glu	His
			740					745				750			
Pro	Phe	Leu	Thr	Pro	Ser	Pro	Glu	Ser	Pro	Asp	Gln	Trp	Ser	Ser	Ser
		755					760					765			
Ser	Pro	His	Ser	Asn	Val	Ser	Asp	Trp	Ser	Glu	Gly	Val	Ser	Ser	Pro
	770					775					780				
Pro	Thr	Ser	Met	Gln	Ser	Gln	Ile	Ala	Arg	Ile	Pro	Glu	Ala	Phe	Lys
	785					790					795				800

<210> 18

<211> 63

<212> PRT

<213> Drosophila sp.

<400> 18

Trp	Lys	Thr	Asn	Lys	Ser	Glu	Ser	Gln	Tyr	Thr	Ser	Leu	Glu	Tyr	Asp
1				5					10					15	
Phe	Arg	Val	Thr	Cys	Asp	Leu	Asn	Tyr	Tyr	Gly	Ser	Gly	Cys	Ala	Lys
			20					25					30		
Phe	Cys	Arg	Pro	Arg	Asp	Asp	Ser	Phe	Gly	His	Ser	Thr	Cys	Ser	Glu
		35					40					45			
Thr	Gly	Glu	Ile	Ile	Cys	Leu	Thr	Gly	Trp	Gln	Gly	Asp	Tyr	Cys	
	50					55					60				

<210> 19

<211> 63

<212> PRT

<213> Homo sapiens

<400> 19

Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Lys Tyr Ser
1 5 10 15
Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val
20 25 30
Phe Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Glu
35 40 45
Arg Gly Glu Lys Val Cys Asn Pro Gly Trp Lys Gly Pro Tyr Cys
50 55 60

<210> 20

<211> 63

<212> PRT

<213> Mus musculus

<400> 20

Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Arg Tyr Ser
1 5 10 15
Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val
20 25 30
Phe Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Asp
35 40 45
Arg Gly Glu Lys Met Cys Asp Pro Gly Trp Lys Gly Gln Tyr Cys
50 55 60

<210> 21

<211> 63

<212> PRT

<213> Rattus rattus

<400> 21

Trp Ser Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Arg Tyr Ser
1 5 10 15
Tyr Arg Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val
20 25 30

Phe Cys Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Glu
35 40 45

Arg Gly Glu Lys Met Cys Asp Pro Gly Trp Lys Gly Gln Tyr Cys
50 55 60

<210> 22

<211> 63

<212> PRT

<213> Mus musculus

<400> 22

Trp Arg Thr Asp Glu Gln Asn Asp Thr Leu Thr Arg Leu Ser Tyr Ser
1 5 10 15

Tyr Arg Val Ile Cys Ser Asp Asn Tyr Tyr Gly Glu Ser Cys Ser Arg
20 25 30

Leu Cys Lys Lys Arg Asp Asp His Phe Gly His Tyr Glu Cys Gln Pro
35 40 45

Asp Gly Ser Leu Ser Cys Leu Pro Gly Trp Thr Gly Lys Tyr Cys
50 55 60

<210> 23

<211> 63

<212> PRT

<213> Homo sapiens

<400> 23

Trp Leu Leu Asp Glu Gln Thr Ser Thr Leu Thr Arg Leu Arg Tyr Ser
1 5 10 15

Tyr Arg Val Ile Cys Ser Asp Asn Tyr Tyr Gly Asp Asn Cys Ser Arg
20 25 30

Leu Cys Lys Lys Arg Asn Asp His Phe Gly His Tyr Val Cys Gln Pro
35 40 45

Asp Gly Asn Leu Ser Cys Leu Pro Gly Trp Thr Gly Glu Tyr Cys
50 55 60

<210> 24

<211> 63

<212> PRT

<213> Rattus rattus

<400> 24

Trp Gln Thr Leu Lys Gln Asn Thr Gly Ile Ala His Phe Glu Tyr Gln
1 5 10 15
Ile Arg Val Thr Cys Asp Asp His Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30
Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly His Tyr Ala Cys Asp Gln
35 40 45
Asn Gly Asn Lys Thr Cys Met Glu Gly Trp Met Gly Pro Glu Cys
50 55 60

<210> 25

<211> 63

<212> PRT

<213> Mus musculus

<400> 25

Trp Gln Thr Leu Lys Gln Asn Thr Gly Ile Ala His Phe Glu Tyr Gln
1 5 10 15
Ile Arg Val Thr Cys Asp Asp His Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30
Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly His Tyr Ala Cys Asp Gln
35 40 45
Asn Gly Asn Lys Thr Cys Met Glu Gly Trp Met Gly Pro Asp Cys
50 55 60

<210> 26

<211> 63

<212> PRT

<213> Homo sapiens

<400> 26

Trp Gln Thr Leu Lys Gln Asn Thr Gly Val Ala His Phe Glu Tyr Gln
1 5 10 15
Ile Arg Val Thr Cys Asp Asp Tyr Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30
Phe Cys Arg Pro Arg Asp Asp Phe Phe Gly His Tyr Ala Cys Asp Gln
35 40 45
Asn Gly Asn Lys Thr Cys Met Glu Gly Trp Met Gly Arg Glu Cys
50 55 60

<210> 27

<211> 63

<212> PRT

<213> Gallus sp.

<400> 27

Trp Gln Thr Leu Lys His Asn Thr Gly Ala Ala His Phe Glu Tyr Gln
1 5 10 15
Ile Arg Val Thr Cys Ala Glu His Tyr Tyr Gly Phe Gly Cys Asn Lys
20 25 30
Phe Cys Arg Pro Arg Asp Asp Phe Phe Thr His His Thr Cys Asp Gln
35 40 45
Asn Gly Asn Lys Thr Cys Leu Glu Gly Trp Thr Gly Pro Glu Cys
50 55 60

<210> 28

<211> 63

<212> PRT

<213> Gallus sp.

<400> 28

Trp Lys Thr Leu Gln Phe Asn Gly Pro Val Ala Asn Phe Glu Val Gln
1 5 10 15
Ile Arg Val Lys Cys Asp Glu Asn Tyr Tyr Ser Ala Leu Cys Asn Lys
20 25 30
Phe Cys Gly Pro Arg Asp Asp Phe Val Gly His Tyr Thr Cys Asp Gln
35 40 45
Asn Gly Asn Lys Ala Cys Met Glu Gly Trp Met Gly Glu Glu Cys
50 55 60

<210> 29

<211> 63

<212> PRT

<213> Mus musculus

<400> 29

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1 5 10 15
Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
20 25 30
Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
35 40 45

Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
50 55 60

<210> 30

<211> 63

<212> PRT

<213> Homo sapiens

<400> 30

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1 5 10 15

Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
20 25 30

Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
35 40 45

Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
50 55 60

<210> 31

<211> 63

<212> PRT

<213> Rattus rattus

<400> 31

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln
1 5 10 15

Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn Lys
20 25 30

Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp Gln
35 40 45

Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
50 55 60

<210> 32

<211> 63

<212> PRT

<213> Homo sapiens

<400> 32

Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu Gln

1	5	10	15
Ile Arg Val	Arg Cys Asp Glu Asn Tyr	Tyr Ser Ala Thr	Cys Asn Lys
	20	25	30
Phe Cys Arg	Pro Arg Asn Asp Phe Phe Gly His Tyr	Thr Cys Asp Gln	
	35	40	45
Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met	Gly Lys Glu Cys		
	50	55	60

<210> 33

<211> 63

<212> PRT

<213> Drosophila melanogaster

<400> 33

Trp Lys Thr Leu	Asp His Ile Gly Arg Asn Ala Arg Ile Thr Tyr Arg
1	5 10 15
Val Arg Val	Gln Cys Ala Val Thr Tyr Tyr Asn Thr Thr Cys Thr Thr
	20 25 30
Phe Cys Arg	Pro Arg Asp Asp Gln Phe Gly His Tyr Ala Cys Gly Ser
	35 40 45
Glu Gly Gln Lys Leu Cys Leu Asn Gly Trp Gln Gly Val Asn Cys	
	50 55 60

<210> 34

<211> 723

<212> PRT

<213> Homo sapiens

<400> 34

Met Gly Ser Arg	Cys Ala Leu Ala Leu Ala Val Leu Ser Ala Leu Leu
1	5 10 15
Cys Gln Val	Trp Ser Ser Gly Val Phe Glu Leu Lys Leu Gln Glu Phe
	20 25 30
Val Asn Lys	Lys Gly Leu Leu Gly Asn Arg Asn Cys Cys Arg Gly Gly
	35 40 45
Ala Gly Pro Pro Pro Cys Ala Cys Arg Thr Phe Phe Arg Val Cys Leu	
	50 55 60
Lys His Tyr Gln Ala Ser Val Ser Pro Glu Pro Pro Cys Thr Tyr Gly	
65	70 75 80
Ser Ala Val Thr	Pro Val Leu Gly Val Asp Ser Phe Ser Leu Pro Asp
	85 90 95

Gly Gly Gly Ala Asp Ser Ala Phe Ser Asn Pro Ile Arg Phe Pro Phe
 100 105 110
 Gly Phe Thr Trp Pro Gly Thr Phe Ser Leu Ile Ile Glu Ala Leu His
 115 120 125
 Thr Asp Ser Pro Asp Asp Leu Ala Thr Glu Asn Pro Glu Arg Leu Ile
 130 135 140
 Ser Arg Leu Ala Thr Gln Arg His Leu Thr Val Gly Glu Glu Trp Ser
 145 150 155 160
 Gln Asp Leu His Ser Ser Gly Arg Thr Asp Leu Lys Tyr Ser Tyr Arg
 165 170 175
 Phe Val Cys Asp Glu His Tyr Tyr Gly Glu Gly Cys Ser Val Phe Cys
 180 185 190
 Arg Pro Arg Asp Asp Ala Phe Gly His Phe Thr Cys Gly Glu Arg Gly
 195 200 205
 Glu Lys Val Cys Asn Pro Gly Trp Lys Gly Pro Tyr Cys Thr Glu Pro
 210 215 220
 Ile Cys Leu Pro Gly Cys Asp Glu Gln His Gly Phe Cys Asp Lys Pro
 225 230 235 240
 Gly Glu Cys Lys Cys Arg Val Gly Trp Gln Gly Arg Tyr Cys Asp Glu
 245 250 255
 Cys Ile Arg Tyr Pro Gly Cys Leu His Gly Thr Cys Gln Gln Pro Trp
 260 265 270
 Gln Cys Asn Cys Gln Glu Gly Trp Gly Gly Leu Phe Cys Asn Gln Asp
 275 280 285
 Leu Asn Tyr Cys Thr His His Lys Pro Cys Lys Asn Gly Ala Thr Cys
 290 295 300
 Thr Asn Thr Gly Gln Gly Ser Tyr Thr Cys Ser Cys Arg Pro Gly Tyr
 305 310 315 320
 Thr Gly Ala Thr Cys Glu Leu Gly Ile Asp Glu Cys Asp Pro Ser Pro
 325 330 335
 Cys Lys Asn Gly Gly Ser Cys Thr Asp Leu Glu Asn Ser Tyr Ser Cys
 340 345 350
 Thr Cys Pro Pro Gly Phe Tyr Gly Lys Ile Cys Glu Leu Ser Ala Met
 355 360 365
 Thr Cys Ala Asp Gly Pro Cys Phe Asn Gly Gly Arg Cys Ser Asp Ser
 370 375 380
 Pro Asp Gly Gly Tyr Ser Cys Arg Cys Pro Val Gly Tyr Ser Gly Phe
 385 390 395 400
 Asn Cys Glu Lys Lys Ile Asp Tyr Cys Ser Ser Ser Pro Cys Ser Asn
 405 410 415
 Gly Ala Lys Cys Val Asp Leu Gly Asp Ala Tyr Leu Cys Arg Cys Gln
 420 425 430
 Ala Gly Phe Ser Gly Arg His Cys Asp Asp Asn Val Asp Asp Cys Ala
 435 440 445

Ser Ser Pro Cys Ala Asn Gly Gly Thr Cys Arg Asp Gly Val Asn Asp
 450 455 460
 Phe Ser Cys Thr Cys Pro Pro Gly Tyr Thr Gly Arg Asn Cys Ser Ala
 465 470 475 480
 Pro Val Ser Arg Cys Glu His Ala Pro Cys His Asn Gly Ala Thr Cys
 485 490 495
 His Glu Arg Gly His Gly Tyr Val Cys Glu Cys Ala Arg Gly Tyr Gly
 500 505 510
 Gly Pro Asn Cys Gln Phe Leu Leu Pro Glu Leu Pro Pro Gly Pro Ala
 515 520 525
 Val Val Asp Leu Thr Glu Lys Leu Glu Gly Gln Gly Gly Pro Phe Pro
 530 535 540
 Trp Val Ala Val Cys Ala Gly Val Ile Leu Val Leu Met Leu Leu Leu
 545 550 555 560
 Gly Cys Ala Ala Val Val Val Cys Val Arg Leu Arg Leu Gln Lys His
 565 570 575
 Arg Pro Pro Ala Asp Pro Cys Arg Gly Glu Thr Glu Thr Met Asn Asn
 580 585 590
 Leu Ala Asn Cys Gln Arg Glu Lys Asp Ile Ser Val Ser Ile Ile Gly
 595 600 605
 Ala Thr Gln Ile Lys Asn Thr Asn Lys Lys Ala Asp Phe His Gly Asp
 610 615 620
 His Ser Ala Asp Lys Asn Gly Phe Lys Ala Arg Tyr Pro Ala Val Asp
 625 630 635 640
 Tyr Asn Leu Val Gln Asp Leu Lys Gly Asp Asp Thr Ala Val Arg Asp
 645 650 655
 Ala His Ser Lys Arg Asp Thr Lys Cys Gln Pro Gln Gly Ser Ser Gly
 660 665 670
 Glu Glu Lys Gly Thr Pro Thr Thr Leu Arg Gly Gly Glu Ala Ser Glu
 675 680 685
 Arg Lys Arg Pro Asp Ser Gly Cys Ser Thr Ser Lys Asp Thr Lys Tyr
 690 695 700
 Gln Ser Val Tyr Val Ile Ser Glu Glu Lys Asp Glu Cys Val Ile Ala
 705 710 715 720
 Thr Glu Val

<210> 35

<211> 618

<212> PRT

<213> Homo sapiens

<400> 35

Met Val Ser Pro Arg Met Ser Gly Leu Leu Ser Gln Thr Val Ile Leu
1 5 10 15
Ala Leu Ile Phe Leu Pro Gln Thr Arg Pro Ala Gly Val Phe Glu Leu
20 25 30
Gln Ile His Ser Phe Gly Pro Gly Pro Gly Ala Pro Arg Ser
35 40 45
Pro Cys Ser Ala Arg Leu Pro Cys Arg Leu Phe Phe Arg Val Cys Leu
50 55 60
Lys Pro Gly Leu Ser Glu Glu Ala Ala Glu Ser Pro Cys Ala Leu Gly
65 70 75 80
Ala Ala Leu Ser Ala Arg Gly Pro Val Tyr Thr Glu Gln Pro Gly Ala
85 90 95
Pro Ala Pro Asp Leu Pro Leu Pro Asp Gly Leu Leu Gln Val Pro Phe
100 105 110
Arg Asp Ala Trp Pro Gly Thr Phe Ser Phe Ile Ile Glu Thr Trp Arg
115 120 125
Glu Glu Leu Gly Asp Gln Ile Gly Gly Pro Ala Trp Ser Leu Leu Ala
130 135 140
Arg Val Ala Gly Arg Arg Arg Leu Ala Ala Gly Gly Pro Trp Ala Arg
145 150 155 160
Asp Ile Gln Arg Ala Gly Ala Trp Glu Leu Arg Phe Ser Tyr Arg Ala
165 170 175
Arg Cys Glu Pro Pro Ala Val Gly Thr Ala Cys Thr Arg Leu Cys Arg
180 185 190
Pro Arg Ser Ala Pro Ser Arg Cys Gly Pro Gly Leu Arg Pro Cys Ala
195 200 205
Pro Leu Glu Asp Glu Cys Glu Ala Pro Leu Val Cys Arg Ala Gly Cys
210 215 220
Ser Pro Glu His Gly Phe Cys Glu Gln Pro Gly Glu Cys Arg Cys Leu
225 230 235 240
Glu Gly Trp Thr Gly Pro Leu Cys Thr Val Pro Val Ser Thr Ser Ser
245 250 255
Cys Leu Ser Pro Arg Gly Pro Ser Ser Ala Thr Thr Gly Cys Leu Val
260 265 270
Pro Gly Pro Gly Pro Cys Asp Gly Asn Pro Cys Ala Asn Gly Gly Ser
275 280 285
Cys Ser Glu Thr Pro Arg Ser Phe Glu Cys Thr Cys Pro Arg Gly Phe
290 295 300
Tyr Gly Leu Arg Cys Glu Val Ser Gly Val Thr Cys Ala Asp Gly Pro
305 310 315 320
Cys Phe Asn Gly Gly Leu Cys Val Gly Gly Ala Asp Pro Asp Ser Ala
325 330 335

Tyr Ile Cys His Cys Pro Pro Gly Phe Gln Gly Ser Asn Cys Glu Lys
 340 345 350
 Arg Val Asp Arg Cys Ser Leu Gln Pro Cys Arg Asn Gly Gly Leu Cys
 355 360 365
 Leu Asp Leu Gly His Ala Leu Arg Cys Arg Cys Arg Ala Gly Phe Ala
 370 375 380
 Gly Pro Arg Cys Glu His Asp Leu Asp Asp Cys Ala Gly Arg Ala Cys
 385 390 395 400
 Ala Asn Gly Gly Thr Cys Val Glu Gly Gly Gly Ala His Arg Cys Ser
 405 410 415
 Cys Ala Leu Gly Phe Gly Gly Arg Asp Cys Arg Glu Arg Ala Asp Pro
 420 425 430
 Cys Ala Ala Arg Pro Cys Ala His Gly Gly Arg Cys Tyr Ala His Phe
 435 440 445
 Ser Gly Leu Val Cys Ala Cys Ala Pro Gly Tyr Met Gly Ala Arg Cys
 450 455 460
 Glu Phe Pro Val His Pro Asp Gly Ala Ser Ala Leu Pro Ala Ala Pro
 465 470 475 480
 Pro Gly Leu Arg Pro Gly Asp Pro Gln Arg Tyr Leu Leu Pro Pro Ala
 485 490 495
 Leu Gly Leu Leu Val Ala Ala Gly Val Ala Gly Ala Ala Leu Leu Leu
 500 505 510
 Val His Val Arg Arg Arg Gly His Ser Gln Asp Ala Gly Ser Arg Leu
 515 520 525
 Leu Ala Gly Thr Pro Glu Pro Ser Val His Ala Leu Pro Asp Ala Leu
 530 535 540
 Asn Asn Leu Arg Thr Gln Glu Gly Ser Gly Asp Gly Pro Ser Ser Ser
 545 550 555 560
 Val Asp Trp Asn Arg Pro Glu Asp Val Asp Pro Gln Gly Ile Tyr Val
 565 570 575
 Ile Ser Ala Pro Ser Ile Tyr Ala Arg Glu Val Ala Thr Pro Leu Phe
 580 585 590
 Pro Pro Leu His Thr Gly Arg Ala Gly Gln Arg Gln His Leu Leu Phe
 595 600 605
 Pro Tyr Pro Ser Ser Ile Leu Ser Val Lys
 610 615

<210> 36

<211> 685

<212> PRT

<213> Homo sapiens

<400> 36

Met Ala Ala Ala Ser Arg Ser Ala Ser Gly Trp Ala Leu Leu Leu Leu
 1 5 10 15
 Val Ala Leu Trp Gln Gln Arg Ala Ala Gly Ser Gly Val Phe Gln Leu
 20 25 30
 Gln Leu Gln Glu Phe Ile Asn Glu Arg Gly Val Leu Ala Ser Gly Arg
 35 40 45
 Pro Cys Glu Pro Gly Cys Arg Thr Phe Phe Arg Val Cys Leu Lys His
 50 55 60
 Phe Gln Ala Val Val Ser Pro Gly Pro Cys Thr Phe Gly Thr Val Ser
 65 70 75 80
 Thr Pro Val Leu Gly Thr Asn Ser Phe Ala Val Arg Asp Asp Ser Ser
 85 90 95
 Gly Gly Gly Arg Asn Pro Leu Gln Leu Pro Phe Asn Phe Thr Trp Pro
 100 105 110
 Gly Thr Phe Ser Leu Ile Ile Glu Ala Trp His Ala Pro Gly Asp Asp
 115 120 125
 Leu Arg Pro Glu Ala Leu Pro Pro Asp Ala Leu Ile Ser Lys Ile Ala
 130 135 140
 Ile Gln Gly Ser Leu Ala Val Gly Gln Asn Trp Leu Leu Asp Glu Gln
 145 150 155 160
 Thr Ser Thr Leu Thr Arg Leu Arg Tyr Ser Tyr Arg Val Ile Cys Ser
 165 170 175
 Asp Asn Tyr Tyr Gly Asp Asn Cys Ser Arg Leu Cys Lys Lys Arg Asn
 180 185 190
 Asp His Phe Gly His Tyr Val Cys Gln Pro Asp Gly Asn Leu Ser Cys
 195 200 205
 Leu Pro Gly Trp Thr Gly Glu Tyr Cys Gln Gln Pro Ile Cys Leu Ser
 210 215 220
 Gly Cys His Glu Gln Asn Gly Tyr Cys Ser Lys Pro Ala Glu Cys Leu
 225 230 235 240
 Cys Arg Pro Gly Trp Gln Gly Arg Leu Cys Asn Glu Cys Ile Pro His
 245 250 255
 Asn Gly Cys Arg His Gly Thr Cys Ser Thr Pro Trp Gln Cys Thr Cys
 260 265 270
 Asp Glu Gly Trp Gly Gly Leu Phe Cys Asp Gln Asp Leu Asn Tyr Cys
 275 280 285
 Thr His His Ser Pro Cys Lys Asn Gly Ala Thr Cys Ser Asn Ser Gly
 290 295 300
 Gln Arg Ser Tyr Thr Cys Thr Cys Arg Pro Gly Tyr Thr Gly Val Asp
 305 310 315 320
 Cys Glu Leu Glu Leu Ser Glu Cys Asp Ser Asn Pro Cys Arg Asn Gly
 325 330 335
 Gly Ser Cys Lys Asp Gln Glu Asp Gly Tyr His Cys Leu Cys Pro Pro

340							345					350				
Gly	Tyr	Tyr 355	Gly	Leu	His	Cys	Glu 360	His	Ser	Thr	Leu	Ser 365	Cys	Ala	Asp	
Ser	Pro 370	Cys	Phe	Asn	Gly	Gly 375	Ser	Cys	Arg	Glu	Arg 380	Asn	Gln	Gly	Ala	
Asn 385	Tyr	Ala	Cys	Glu	Cys 390	Pro	Pro	Asn	Phe	Thr 395	Gly	Ser	Asn	Cys	Glu 400	
Lys	Lys	Val	Asp	Arg 405	Cys	Thr	Ser	Asn	Pro 410	Cys	Ala	Asn	Gly	Gly 415	Gln	
Cys	Leu	Asn	Arg 420	Gly	Pro	Ser	Arg	Met 425	Cys	Arg	Cys	Arg	Pro 430	Gly	Phe	
Thr	Gly	Thr 435	Tyr	Cys	Glu	Leu	His 440	Val	Ser	Asp	Cys	Ala 445	Arg	Asn	Pro	
Cys	Ala 450	His	Gly	Gly	Thr	Cys 455	His	Asp	Leu	Glu	Asn 460	Gly	Leu	Met	Cys	
Thr 465	Cys	Pro	Ala	Gly	Phe 470	Ser	Gly	Arg	Arg	Cys 475	Glu	Val	Arg	Thr	Ser 480	
Ile	Asp	Ala	Cys	Ala 485	Ser	Ser	Pro	Cys	Phe 490	Asn	Arg	Ala	Thr	Cys 495	Tyr	
Thr	Asp	Leu	Ser 500	Thr	Asp	Thr	Phe	Val 505	Cys	Asn	Cys	Pro	Tyr 510	Gly	Phe	
Val	Gly	Ser 515	Arg	Cys	Glu	Phe	Pro 520	Val	Gly	Leu	Pro	Pro 525	Ser	Phe	Pro	
Trp	Val 530	Ala	Val	Ser	Leu	Gly 535	Val	Gly	Leu	Ala	Val 540	Leu	Leu	Val	Leu	
Leu 545	Gly	Met	Val	Ala	Val 550	Ala	Val	Arg	Gln	Leu 555	Arg	Leu	Arg	Arg	Pro 560	
Asp	Asp	Gly	Ser	Arg 565	Glu	Ala	Met	Asn	Asn 570	Leu	Ser	Asp	Phe	Gln 575	Lys	
Asp	Asn	Leu	Ile 580	Pro	Ala	Ala	Gln	Leu 585	Lys	Asn	Thr	Asn	Gln 590	Lys	Lys	
Glu	Leu	Glu 595	Val	Asp	Cys	Gly	Leu 600	Asp	Lys	Ser	Asn	Cys 605	Gly	Lys	Gln	
Gln	Asn 610	His	Thr	Leu	Asp	Tyr 615	Asn	Leu	Ala	Pro	Gly 620	Pro	Leu	Gly	Arg	
Gly 625	Thr	Met	Pro	Gly	Lys 630	Phe	Pro	His	Ser	Asp 635	Lys	Ser	Leu	Gly	Glu 640	
Lys	Ala	Pro	Leu	Arg 645	Leu	His	Ser	Glu	Lys 650	Pro	Glu	Cys	Arg	Ile 655	Ser	
Ala	Ile	Cys	Ser 660	Pro	Arg	Asp	Ser	Met 665	Tyr	Gln	Ser	Val	Cys 670	Leu	Ile	
Ser	Glu	Glu 675	Arg	Asn	Glu	Cys	Val 680	Ile	Ala	Thr	Glu	Val 685				

<210> 37

<211> 1218

<212> PRT

<213> Homo sapiens

<400> 37

Met	Arg	Ser	Pro	Arg	Thr	Arg	Gly	Arg	Ser	Gly	Arg	Pro	Leu	Ser	Leu
1				5					10					15	
Leu	Leu	Ala	Leu	Leu	Cys	Ala	Leu	Arg	Ala	Lys	Val	Cys	Gly	Ala	Ser
			20					25					30		
Gly	Gln	Phe	Glu	Leu	Glu	Ile	Leu	Ser	Met	Gln	Asn	Val	Asn	Gly	Glu
		35					40					45			
Leu	Gln	Asn	Gly	Asn	Cys	Cys	Gly	Gly	Ala	Arg	Asn	Pro	Gly	Asp	Arg
	50					55					60				
Lys	Cys	Thr	Arg	Asp	Glu	Cys	Asp	Thr	Tyr	Phe	Lys	Val	Cys	Leu	Lys
65					70					75					80
Glu	Tyr	Gln	Ser	Arg	Val	Thr	Ala	Gly	Gly	Pro	Cys	Ser	Phe	Gly	Ser
				85					90					95	
Gly	Ser	Thr	Pro	Val	Ile	Gly	Gly	Asn	Thr	Phe	Asn	Leu	Lys	Ala	Ser
			100					105					110		
Arg	Gly	Asn	Asp	Arg	Asn	Arg	Ile	Val	Leu	Pro	Phe	Ser	Phe	Ala	Trp
		115					120					125			
Pro	Arg	Ser	Tyr	Thr	Leu	Leu	Val	Glu	Ala	Trp	Asp	Ser	Ser	Asn	Asp
	130					135					140				
Thr	Val	Gln	Pro	Asp	Ser	Ile	Ile	Glu	Lys	Ala	Ser	His	Ser	Gly	Met
145					150					155					160
Ile	Asn	Pro	Ser	Arg	Gln	Trp	Gln	Thr	Leu	Lys	Gln	Asn	Thr	Gly	Val
				165					170					175	
Ala	His	Phe	Glu	Tyr	Gln	Ile	Arg	Val	Thr	Cys	Asp	Asp	Tyr	Tyr	Tyr
			180					185					190		
Gly	Phe	Gly	Cys	Asn	Lys	Phe	Cys	Arg	Pro	Arg	Asp	Asp	Phe	Phe	Gly
		195					200					205			
His	Tyr	Ala	Cys	Asp	Gln	Asn	Gly	Asn	Lys	Thr	Cys	Met	Glu	Gly	Trp
	210					215					220				
Met	Gly	Pro	Glu	Cys	Asn	Arg	Ala	Ile	Cys	Arg	Gln	Gly	Cys	Ser	Pro
225					230					235					240
Lys	His	Gly	Ser	Cys	Lys	Leu	Pro	Gly	Asp	Cys	Arg	Cys	Gln	Tyr	Gly
				245					250					255	
Trp	Gln	Gly	Leu	Tyr	Cys	Asp	Lys	Cys	Ile	Pro	His	Pro	Gly	Cys	Val
			260					265					270		
His	Gly	Ile	Cys	Asn	Glu	Pro	Trp	Gln	Cys	Leu	Cys	Glu	Thr	Asn	Trp
		275					280					285			

Gly Gly Gln Leu Cys Asp Lys Asp Leu Asn Tyr Cys Gly Thr His Gln
 290 295 300
 Pro Cys Leu Asn Gly Gly Thr Cys Ser Asn Thr Gly Pro Asp Lys Tyr
 305 310 315 320
 Gln Cys Ser Cys Pro Glu Gly Tyr Ser Gly Pro Asn Cys Glu Ile Ala
 325 330 335
 Glu His Ala Cys Leu Ser Asp Pro Cys His Asn Arg Gly Ser Cys Lys
 340 345 350
 Glu Thr Ser Leu Gly Phe Glu Cys Glu Cys Ser Pro Gly Trp Thr Gly
 355 360 365
 Pro Thr Cys Ser Thr Asn Ile Asp Asp Cys Ser Pro Asn Asn Cys Ser
 370 375 380
 His Gly Gly Thr Cys Gln Asp Leu Val Asn Gly Phe Lys Cys Val Cys
 385 390 395 400
 Pro Pro Gln Trp Thr Gly Lys Thr Cys Gln Leu Asp Ala Asn Glu Cys
 405 410 415
 Glu Ala Lys Pro Cys Val Asn Ala Lys Ser Cys Lys Asn Leu Ile Ala
 420 425 430
 Ser Tyr Tyr Cys Asp Cys Leu Pro Gly Trp Met Gly Gln Asn Cys Asp
 435 440 445
 Ile Asn Ile Asn Asp Cys Leu Gly Gln Cys Gln Asn Asp Ala Ser Cys
 450 455 460
 Arg Asp Leu Val Asn Gly Tyr Arg Cys Ile Cys Pro Pro Gly Tyr Ala
 465 470 475 480
 Gly Asp His Cys Glu Arg Asp Ile Asp Glu Cys Ala Ser Asn Pro Cys
 485 490 495
 Leu Asn Gly Gly His Cys Gln Asn Glu Ile Asn Arg Phe Gln Cys Leu
 500 505 510
 Cys Pro Thr Gly Phe Ser Gly Asn Leu Cys Gln Leu Asp Ile Asp Tyr
 515 520 525
 Cys Glu Pro Asn Pro Cys Gln Asn Gly Ala Gln Cys Tyr Asn Arg Ala
 530 535 540
 Ser Asp Tyr Phe Cys Lys Cys Pro Glu Asp Tyr Glu Gly Lys Asn Cys
 545 550 555 560
 Ser His Leu Lys Asp His Cys Arg Thr Thr Pro Cys Glu Val Ile Asp
 565 570 575
 Ser Cys Thr Val Ala Met Ala Ser Asn Asp Thr Pro Glu Gly Val Arg
 580 585 590
 Tyr Ile Ser Ser Asn Val Cys Gly Pro His Gly Lys Cys Lys Ser Gln
 595 600 605
 Ser Gly Gly Lys Phe Thr Cys Asp Cys Asn Lys Gly Phe Thr Gly Thr
 610 615 620
 Tyr Cys His Glu Asn Ile Asn Asp Cys Glu Ser Asn Pro Cys Arg Asn

625					630						635					640
Gly	Gly	Thr	Cys	Ile	Asp	Gly	Val	Asn	Ser	Tyr	Lys	Cys	Ile	Cys	Ser	
				645					650					655		
Asp	Gly	Trp	Glu	Gly	Ala	Tyr	Cys	Glu	Thr	Asn	Ile	Asn	Asp	Cys	Ser	
			660					665					670			
Gln	Asn	Pro	Cys	His	Asn	Gly	Gly	Thr	Cys	Arg	Asp	Leu	Val	Asn	Asp	
		675					680					685				
Phe	Tyr	Cys	Asp	Cys	Lys	Asn	Gly	Trp	Lys	Gly	Lys	Thr	Cys	His	Ser	
	690					695					700					
Arg	Asp	Ser	Gln	Cys	Asp	Glu	Ala	Thr	Cys	Asn	Asn	Gly	Gly	Thr	Cys	
705					710					715						720
Tyr	Asp	Glu	Gly	Asp	Ala	Phe	Lys	Cys	Met	Cys	Pro	Gly	Gly	Trp	Glu	
				725					730					735		
Gly	Thr	Thr	Cys	Asn	Ile	Ala	Arg	Asn	Ser	Ser	Cys	Leu	Pro	Asn	Pro	
			740					745					750			
Cys	His	Asn	Gly	Gly	Thr	Cys	Val	Val	Asn	Gly	Glu	Ser	Phe	Thr	Cys	
		755					760					765				
Val	Cys	Lys	Glu	Gly	Trp	Glu	Gly	Pro	Ile	Cys	Ala	Gln	Asn	Thr	Asn	
	770					775					780					
Asp	Cys	Ser	Pro	His	Pro	Cys	Tyr	Asn	Ser	Gly	Thr	Cys	Val	Asp	Gly	
785					790					795					800	
Asp	Asn	Trp	Tyr	Arg	Cys	Glu	Cys	Ala	Pro	Gly	Phe	Ala	Gly	Pro	Asp	
				805					810					815		
Cys	Arg	Ile	Asn	Ile	Asn	Glu	Cys	Gln	Ser	Ser	Pro	Cys	Ala	Phe	Gly	
			820					825					830			
Ala	Thr	Cys	Val	Asp	Glu	Ile	Asn	Gly	Tyr	Arg	Cys	Val	Cys	Pro	Pro	
		835					840					845				
Gly	His	Ser	Gly	Ala	Lys	Cys	Gln	Glu	Val	Ser	Gly	Arg	Pro	Cys	Ile	
	850					855					860					
Thr	Met	Gly	Ser	Val	Ile	Pro	Asp	Gly	Ala	Lys	Trp	Asp	Asp	Asp	Cys	
865					870					875					880	
Asn	Thr	Cys	Gln	Cys	Leu	Asn	Gly	Arg	Ile	Ala	Cys	Ser	Lys	Val	Trp	
				885					890					895		
Cys	Gly	Pro	Arg	Pro	Cys	Leu	Leu	His	Lys	Gly	His	Ser	Glu	Cys	Pro	
			900					905					910			
Ser	Gly	Gln	Ser	Cys	Ile	Pro	Ile	Leu	Asp	Asp	Gln	Cys	Phe	Val	His	
		915					920					925				
Pro	Cys	Thr	Gly	Val	Gly	Glu	Cys	Arg	Ser	Ser	Ser	Leu	Gln	Pro	Val	
	930					935					940					
Lys	Thr	Lys	Cys	Thr	Ser	Asp	Ser	Tyr	Tyr	Gln	Asp	Asn	Cys	Ala	Asn	
945					950					955					960	
Ile	Thr	Phe	Thr	Phe	Asn	Lys	Glu	Met	Met	Ser	Pro	Gly	Leu	Thr	Thr	
				965					970					975		

Glu His Ile Cys Ser Glu Leu Arg Asn Leu Asn Ile Leu Lys Asn Val
 980 985 990
 Ser Ala Glu Tyr Ser Ile Tyr Ile Ala Cys Glu Pro Ser Pro Ser Ala
 995 1000 1005
 Asn Asn Glu Ile His Val Ala Ile Ser Ala Glu Asp Ile Arg Asp
 1010 1015 1020
 Asp Gly Asn Pro Ile Lys Glu Ile Thr Asp Lys Ile Ile Asp Leu
 1025 1030 1035
 Val Ser Lys Arg Asp Gly Asn Ser Ser Leu Ile Ala Ala Val Ala
 1040 1045 1050
 Glu Val Arg Val Gln Arg Arg Pro Leu Lys Asn Arg Thr Asp Phe
 1055 1060 1065
 Leu Val Pro Leu Leu Ser Ser Val Leu Thr Val Ala Trp Ile Cys
 1070 1075 1080
 Cys Leu Val Thr Ala Phe Tyr Trp Cys Leu Arg Lys Arg Arg Lys
 1085 1090 1095
 Pro Gly Ser His Thr His Ser Ala Ser Glu Asp Asn Thr Thr Asn
 1100 1105 1110
 Asn Val Arg Glu Gln Leu Asn Gln Ile Lys Asn Pro Ile Glu Lys
 1115 1120 1125
 His Gly Ala Asn Thr Val Pro Ile Lys Asp Tyr Glu Asn Lys Asn
 1130 1135 1140
 Ser Lys Met Ser Lys Ile Arg Thr His Asn Ser Glu Val Glu Glu
 1145 1150 1155
 Asp Asp Met Asp Lys His Gln Gln Lys Ala Arg Phe Ala Lys Gln
 1160 1165 1170
 Pro Ala Tyr Thr Leu Val Asp Arg Glu Glu Lys Pro Pro Asn Gly
 1175 1180 1185
 Thr Pro Thr Lys His Pro Asn Trp Thr Asn Lys Gln Asp Asn Arg
 1190 1195 1200
 Asp Leu Glu Ser Ala Gln Ser Leu Asn Arg Met Glu Tyr Ile Val
 1205 1210 1215

<210> 38

<211> 1238

<212> PRT

<213> Homo sapiens

<400> 38

Met Arg Ala Gln Gly Arg Gly Arg Leu Pro Arg Arg Leu Leu Leu Leu
 1 5 10 15
 Leu Ala Leu Trp Val Gln Ala Ala Arg Pro Met Gly Tyr Phe Glu Leu
 20 25 30

Gln Leu Ser Ala Leu Arg Asn Val Asn Gly Glu Leu Leu Ser Gly Ala
 35 40 45
 Cys Cys Asp Gly Asp Gly Arg Thr Thr Arg Ala Gly Gly Cys Gly His
 50 55 60
 Asp Glu Cys Asp Thr Tyr Val Arg Val Cys Leu Lys Glu Tyr Gln Ala
 65 70 75 80
 Lys Val Thr Pro Thr Gly Pro Cys Ser Tyr Gly His Gly Ala Thr Pro
 85 90 95
 Val Leu Gly Gly Asn Ser Phe Tyr Leu Pro Pro Ala Gly Ala Ala Gly
 100 105 110
 Asp Arg Ala Arg Ala Arg Ala Arg Ala Gly Gly Asp Gln Asp Pro Gly
 115 120 125
 Leu Val Val Ile Pro Phe Gln Phe Ala Trp Pro Arg Ser Phe Thr Leu
 130 135 140
 Ile Val Glu Ala Trp Asp Trp Asp Asn Asp Thr Thr Pro Asn Glu Glu
 145 150 155 160
 Leu Leu Ile Glu Arg Val Ser His Ala Gly Met Ile Asn Pro Glu Asp
 165 170 175
 Arg Trp Lys Ser Leu His Phe Ser Gly His Val Ala His Leu Glu Leu
 180 185 190
 Gln Ile Arg Val Arg Cys Asp Glu Asn Tyr Tyr Ser Ala Thr Cys Asn
 195 200 205
 Lys Phe Cys Arg Pro Arg Asn Asp Phe Phe Gly His Tyr Thr Cys Asp
 210 215 220
 Gln Tyr Gly Asn Lys Ala Cys Met Asp Gly Trp Met Gly Lys Glu Cys
 225 230 235 240
 Lys Glu Ala Val Cys Lys Gln Gly Cys Asn Leu Leu His Gly Gly Cys
 245 250 255
 Thr Val Pro Gly Glu Cys Arg Cys Ser Tyr Gly Trp Gln Gly Arg Phe
 260 265 270
 Cys Asp Glu Cys Val Pro Tyr Pro Gly Cys Val His Gly Ser Cys Val
 275 280 285
 Glu Pro Trp Gln Cys Asn Cys Glu Thr Asn Trp Gly Gly Leu Leu Cys
 290 295 300
 Asp Lys Asp Leu Asn Tyr Cys Gly Ser His His Pro Cys Thr Asn Gly
 305 310 315 320
 Gly Thr Cys Ile Asn Ala Glu Pro Asp Gln Tyr Arg Cys Thr Cys Pro
 325 330 335
 Asp Gly Tyr Ser Gly Arg Asn Cys Glu Lys Ala Glu His Ala Cys Thr
 340 345 350
 Ser Asn Pro Cys Ala Asn Gly Gly Ser Cys His Glu Val Pro Ser Gly
 355 360 365
 Phe Glu Cys His Cys Pro Ser Gly Trp Ser Gly Pro Thr Cys Ala Leu

370	375	380
Asp 385	Ile Asp Glu Cys 390	Ala Ser Asn Pro Cys 395
Val Asp Gln Val 405	Gly Phe Glu Cys 410	Ile Cys Pro Glu Gln Trp Val 415
Gly Ala Thr 420	Cys Gln Leu Asp Ala 425	Asn Glu Cys Glu Gly Lys Pro Cys 430
Leu Asn Ala 435	Phe Ser Cys Lys Asn 440	Leu Ile Gly Gly Tyr Tyr Cys Asp 445
Cys Ile 450	Pro Gly Trp Lys Gly 455	Ile Asn Cys His Ile Asn Val Asn Asp 460
Cys 465	Arg Gly Gln Cys Gln 470	His Gly Gly Thr Cys Lys Asp Leu Val Asn 480
Gly Tyr Gln Cys 485	Val Cys Pro Arg Gly Phe 490	Gly Gly Arg His Cys Glu 495
Leu Glu Arg 500	Asp Lys Cys Ala Ser 505	Ser Pro Cys His Ser Gly Gly Leu 510
Cys Glu 515	Asp Leu Ala Asp Gly Phe 520	His Cys His Cys Pro Gln Gly Phe 525
Ser Gly 530	Pro Leu Cys Glu Val 535	Asp Val Asp Leu Cys Glu Pro Ser Pro 540
Cys 545	Arg Asn Gly Ala Arg 550	Cys Tyr Asn Leu Glu Gly Asp Tyr Tyr Cys 560
Ala Cys Pro Asp 565	Asp Phe Gly Gly Lys Asn 570	Cys Ser Val Pro Arg Glu 575
Pro Cys Pro 580	Gly Gly Ala Cys Arg Val 585	Ile Asp Gly Cys Gly Ser Asp 590
Ala Gly 595	Pro Gly Thr Ala Ala Ser Gly 605	Val Cys Gly Pro 605
His Gly 610	Arg Cys Val Ser Gln 615	Pro Gly Gly Asn Phe Ser Cys Ile Cys 620
Asp 625	Ser Gly Phe Thr Gly 630	Thr Tyr Cys His Glu Asn Ile Asp Asp Cys 640
Leu Gly Gln Pro 645	Cys Arg Asn Gly Gly Thr 650	Cys Ile Asp Glu Val Asp 655
Ala Phe Arg 660	Cys Phe Cys Pro Ser Gly 665	Trp Glu Gly Glu Leu Cys Asp 670
Thr Asn 675	Pro Asn Asp Cys Leu Pro 680	Asp Pro Cys His Ser Arg Gly Arg 685
Cys Tyr 690	Asp Leu Val Asn Asp 695	Phe Tyr Cys Ala Cys Asp Asp Gly Trp 700
Lys 705	Gly Lys Thr Cys His 710	Ser Arg Glu Phe Gln Cys Asp Ala Tyr Thr 720

Cys Ser Asn Gly Gly Thr Cys Tyr Asp Ser Gly Asp Thr Phe Arg Cys
725 730 735
Ala Cys Pro Pro Gly Trp Lys Gly Ser Thr Cys Ala Val Ala Lys Asn
740 745 750
Ser Ser Cys Leu Pro Asn Pro Cys Val Asn Gly Gly Thr Cys Val Gly
755 760 765
Ser Gly Ala Ser Phe Ser Cys Ile Cys Arg Asp Gly Trp Glu Gly Arg
770 775 780
Thr Cys Thr His Asn Thr Asn Asp Cys Asn Pro Leu Pro Cys Tyr Asn
785 790 795 800
Gly Gly Ile Cys Val Asp Gly Val Asn Trp Phe Arg Cys Glu Cys Ala
805 810 815
Pro Gly Phe Ala Gly Pro Asp Cys Arg Ile Asn Ile Asp Glu Cys Gln
820 825 830
Ser Ser Pro Cys Ala Tyr Gly Ala Thr Cys Val Asp Glu Ile Asn Gly
835 840 845
Tyr Arg Cys Ser Cys Pro Pro Gly Arg Ala Gly Pro Arg Cys Gln Glu
850 855 860
Val Ile Gly Phe Gly Arg Ser Cys Trp Ser Arg Gly Thr Pro Phe Pro
865 870 875 880
His Gly Ser Ser Trp Val Glu Asp Cys Asn Ser Cys Arg Cys Leu Asp
885 890 895
Gly Arg Arg Asp Cys Ser Lys Val Trp Cys Gly Trp Lys Pro Cys Leu
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Leu Ala Gly Gln Pro Glu Ala Leu Ser Ala Gln Cys Pro Leu Gly Gln
915 920 925
Arg Cys Leu Glu Lys Ala Pro Gly Gln Cys Leu Arg Pro Pro Cys Glu
930 935 940
Ala Trp Gly Glu Cys Gly Ala Glu Glu Pro Pro Ser Thr Pro Cys Leu
945 950 955 960
Pro Arg Ser Gly His Leu Asp Asn Asn Cys Ala Arg Leu Thr Leu His
965 970 975
Phe Asn Arg Asp His Val Pro Gln Gly Thr Thr Val Gly Ala Ile Cys
980 985 990
Ser Gly Ile Arg Ser Leu Pro Ala Thr Arg Ala Val Ala Arg Asp Arg
995 1000 1005
Leu Leu Val Leu Leu Cys Asp Arg Ala Ser Ser Gly Ala Ser Ala
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Val Glu Val Ala Val Ser Phe Ser Pro Ala Arg Asp Leu Pro Asp
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Ser Ser Leu Ile Gln Gly Ala Ala His Ala Ile Val Ala Ala Ile
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Thr Gln Arg Gly Asn Ser Ser Leu Leu Leu Ala Val Thr Glu Val
1055 1060 1065

Lys Val Glu Thr Val Val Thr Gly Gly Ser Ser Thr Gly Leu Leu
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 Val Pro Val Leu Cys Gly Ala Phe Ser Val Leu Trp Leu Ala Cys
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 Val Val Leu Cys Val Trp Trp Thr Arg Lys Arg Arg Lys Glu Arg
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 Glu Arg Ser Arg Leu Pro Arg Glu Glu Ser Ala Asn Asn Gln Trp
 1115 1120 1125
 Ala Pro Leu Asn Pro Ile Arg Asn Pro Ile Glu Arg Pro Gly Gly
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 His Lys Asp Val Leu Tyr Gln Cys Lys Asn Phe Thr Pro Pro Pro
 1145 1150 1155
 Arg Arg Ala Asp Glu Ala Leu Pro Gly Pro Ala Gly His Ala Ala
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 Val Arg Glu Asp Glu Glu Asp Glu Asp Leu Gly Arg Gly Glu Glu
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 Asp Ser Leu Glu Ala Glu Lys Phe Leu Ser His Lys Phe Thr Lys
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 Asp Pro Gly Arg Ser Pro Gly Arg Pro Ala His Trp Ala Ser Gly
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 Pro Lys Val Asp Asn Arg Ala Val Arg Ser Ile Asn Glu Ala Arg
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 Tyr Ala Gly Lys Glu
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<220>

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<222> (891)..(891)

<223> X is any amino acid

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 35 40 45
 Gly Gly Ala Phe Val Gly Pro Arg Cys Gln Asp Pro Asn Pro Cys Leu
 50 55 60
 Ser Thr Pro Cys Lys Asn Ala Gly Thr Cys His Val Val Asp Arg Arg
 65 70 75 80
 Gly Val Ala Asp Tyr Ala Cys Ser Cys Ala Leu Gly Phe Ser Gly Pro
 85 90 95
 Leu Cys Leu Thr Pro Leu Asp Asn Ala Cys Leu Thr Asn Pro Cys Arg
 100 105 110
 Asn Gly Gly Thr Cys Asp Leu Leu Thr Leu Thr Glu Tyr Lys Cys Arg
 115 120 125
 Cys Pro Pro Gly Trp Ser Gly Lys Ser Cys Gln Gln Ala Asp Pro Cys
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 Ala Ser Asn Pro Cys Ala Asn Gly Gly Gln Cys Leu Pro Phe Glu Ala
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 Ser Tyr Ile Cys His Cys Pro Pro Ser Phe His Gly Pro Thr Cys Arg
 165 170 175
 Gln Asp Val Asn Glu Cys Gly Gln Lys Pro Arg Leu Cys Arg His Gly
 180 185 190
 Gly Thr Cys His Asn Glu Val Gly Ser Tyr Arg Cys Val Cys Arg Ala
 195 200 205
 Thr His Thr Gly Pro Asn Cys Glu Arg Pro Tyr Val Pro Cys Ser Pro
 210 215 220
 Ser Pro Cys Gln Asn Gly Gly Thr Cys Arg Pro Thr Gly Asp Val Thr
 225 230 235 240
 His Glu Cys Ala Cys Leu Pro Gly Phe Thr Gly Gln Asn Cys Glu Glu
 245 250 255
 Asn Ile Asp Asp Cys Pro Gly Asn Asn Cys Lys Asn Gly Gly Ala Cys
 260 265 270
 Val Asp Gly Val Asn Thr Tyr Asn Cys Pro Cys Pro Pro Glu Trp Thr
 275 280 285
 Gly Gln Tyr Cys Thr Glu Asp Val Asp Glu Cys Gln Leu Met Pro Asn
 290 295 300
 Ala Cys Gln Asn Gly Gly Thr Cys His Asn Thr His Gly Gly Tyr Asn
 305 310 315 320
 Cys Val Cys Val Asn Gly Trp Thr Gly Glu Asp Cys Ser Glu Asn Ile
 325 330 335
 Asp Asp Cys Ala Ser Ala Ala Cys Phe His Gly Ala Thr Cys His Asp
 340 345 350
 Arg Val Ala Ser Phe Tyr Cys Glu Cys Pro His Gly Arg Thr Gly Leu
 355 360 365
 Leu Cys His Leu Asn Asp Ala Cys Ile Ser Asn Pro Cys Asn Glu Gly
 370 375 380

Ser Asn Cys Asp Thr Asn Pro Val Asn Gly Lys Ala Ile Cys Thr Cys
 385 390 395 400
 Pro Ser Gly Tyr Thr Gly Pro Ala Cys Ser Gln Asp Val Asp Glu Cys
 405 410 415
 Ser Leu Gly Ala Asn Pro Cys Glu His Ala Gly Lys Cys Ile Asn Thr
 420 425 430
 Leu Gly Ser Phe Glu Cys Gln Cys Leu Gln Gly Tyr Thr Gly Pro Arg
 435 440 445
 Cys Glu Ile Asp Val Asn Glu Cys Val Ser Asn Pro Cys Gln Asn Asp
 450 455 460
 Ala Thr Cys Leu Asp Gln Ile Gly Glu Phe Gln Cys Met Cys Met Pro
 465 470 475 480
 Gly Tyr Glu Gly Val His Cys Glu Val Asn Thr Asp Glu Cys Ala Ser
 485 490 495
 Ser Pro Cys Leu His Asn Gly Arg Cys Leu Asp Lys Ile Asn Glu Phe
 500 505 510
 Gln Cys Glu Cys Pro Thr Gly Phe Thr Gly His Leu Cys Gln Tyr Asp
 515 520 525
 Val Asp Glu Cys Ala Ser Thr Pro Cys Lys Asn Gly Ala Lys Cys Leu
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 Asp Gly Pro Asn Thr Tyr Thr Cys Val Cys Thr Glu Gly Tyr Thr Gly
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 Thr His Cys Glu Val Asp Ile Asp Glu Cys Asp Pro Asp Pro Cys His
 565 570 575
 Tyr Gly Ser Cys Lys Asp Gly Val Ala Thr Phe Thr Cys Leu Cys Arg
 580 585 590
 Pro Gly Tyr Thr Gly His His Cys Glu Thr Asn Ile Asn Glu Cys Ser
 595 600 605
 Ser Gln Pro Cys Arg Leu Arg Gly Thr Cys Gln Asp Pro Asp Asn Ala
 610 615 620
 Tyr Leu Cys Phe Cys Leu Lys Gly Thr Thr Gly Pro Asn Cys Glu Ile
 625 630 635 640
 Asn Leu Asp Asp Cys Ala Ser Ser Pro Cys Asp Ser Gly Thr Cys Leu
 645 650 655
 Asp Lys Ile Asp Gly Tyr Glu Cys Ala Cys Glu Pro Gly Tyr Thr Gly
 660 665 670
 Ser Met Cys Asn Ser Asn Ile Asp Glu Cys Ala Gly Asn Pro Cys His
 675 680 685
 Asn Gly Gly Thr Cys Glu Asp Gly Ile Asn Gly Phe Thr Cys Arg Cys
 690 695 700
 Pro Glu Gly Tyr His Asp Pro Thr Cys Leu Ser Glu Val Asn Glu Cys
 705 710 715 720
 Asn Ser Asn Pro Cys Val His Gly Ala Cys Arg Asp Ser Leu Asn Gly

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Tyr	Lys	Cys	Asp	Cys	Asp	Pro	Gly	Trp	Ser	Gly	Thr	Asn	Cys	Asp	Ile				
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Asn	Asn	Asn	Glu	Cys	Glu	Ser	Asn	Pro	Cys	Val	Asn	Gly	Gly	Thr	Cys				
		755					760					765							
Lys	Asp	Met	Thr	Ser	Gly	Ile	Val	Cys	Thr	Cys	Arg	Glu	Gly	Phe	Ser				
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Gly	Pro	Asn	Cys	Gln	Thr	Asn	Ile	Asn	Glu	Cys	Ala	Ser	Asn	Pro	Cys				
785					790					795					800				
Leu	Asn	Lys	Gly	Thr	Cys	Ile	Asp	Asp	Val	Ala	Gly	Tyr	Lys	Cys	Asn				
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Cys	Leu	Leu	Pro	Tyr	Thr	Gly	Ala	Thr	Cys	Glu	Val	Val	Leu	Ala	Pro				
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Cys	Ala	Pro	Ser	Pro	Cys	Arg	Asn	Gly	Gly	Glu	Cys	Arg	Gln	Ser	Glu				
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Asp	Tyr	Glu	Ser	Phe	Ser	Cys	Val	Cys	Pro	Thr	Ala	Gly	Ala	Lys	Gly				
	850					855					860								
Gln	Thr	Cys	Glu	Val	Asp	Ile	Asn	Glu	Cys	Val	Leu	Ser	Pro	Cys	Arg				
865					870					875					880				
His	Gly	Ala	Ser	Cys	Gln	Asn	Thr	His	Gly	Xaa	Tyr	Arg	Cys	His	Cys				
				885					890					895					
Gln	Ala	Gly	Tyr	Ser	Gly	Arg	Asn	Cys	Glu	Thr	Asp	Ile	Asp	Asp	Cys				
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Arg	Pro	Asn	Pro	Cys	His	Asn	Gly	Gly	Ser	Cys	Thr	Asp	Gly	Ile	Asn				
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Thr	Ala	Phe	Cys	Asp	Cys	Leu	Pro	Gly	Phe	Arg	Gly	Thr	Phe	Cys	Glu				
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Glu	Asp	Ile	Asn	Glu	Cys	Ala	Ser	Asp	Pro	Cys	Arg	Asn	Gly	Ala	Asn				
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Cys	Phe	Asn	Gly	Gly	Thr	Cys	Val	Asp	Gly	Ile	Asn	Ser	Phe	Thr	Cys				
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Leu	Cys	Pro	Pro	Gly	Phe	Thr	Gly	Ser	Tyr	Cys	Gln	His	Val	Val					
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Asp	Gly	Arg	Gly	Leu	His	Arg	Cys	Thr	Cys	Pro	Gln	Gly	Tyr	Thr					
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Gly	Pro	Asn	Cys	Gln	Asn	Leu	Val	His	Trp	Cys	Asp	Ser	Ser	Pro					
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Cys	Glu	Cys	Pro	Ser	Gly	Trp	Thr	Gly	Leu	Tyr	Cys	Asp	Val	Pro
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Thr	His	His	Cys	Arg	Cys	Gln	Ala	Gly	Tyr	Thr	Gly	Ser	Tyr	Cys
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Glu	Asp	Leu	Val	Asp	Glu	Cys	Ser	Pro	Ser	Pro	Cys	Gln	Asn	Gly
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Ala	Thr	Cys	Thr	Asp	Tyr	Leu	Gly	Gly	Tyr	Ser	Cys	Lys	Cys	Val
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Ala	Gly	Tyr	His	Gly	Val	Asn	Cys	Ser	Glu	Glu	Ile	Asp	Glu	Cys
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Leu	Ser	His	Pro	Cys	Gln	Asn	Gly	Gly	Thr	Cys	Leu	Asp	Leu	Pro
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Asn	Thr	Tyr	Lys	Cys	Ser	Cys	Pro	Arg	Gly	Thr	Gln	Gly	Val	His
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Cys	Glu	Ile	Asn	Val	Asp	Asp	Cys	Asn	Pro	Pro	Val	Asp	Pro	Val
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Ser	Arg	Ser	Pro	Lys	Cys	Phe	Asn	Asn	Gly	Thr	Cys	Val	Asp	Gln
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Val	Gly	Gly	Tyr	Ser	Cys	Thr	Cys	Pro	Pro	Gly	Phe	Val	Gly	Glu
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Arg	Cys	Glu	Gly	Asp	Val	Asn	Glu	Cys	Leu	Ser	Asn	Pro	Cys	Asp
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Ala	Arg	Gly	Thr	Gln	Asn	Cys	Val	Gln	Arg	Val	Asn	Asp	Phe	His
	1280					1285					1290			
Cys	Glu	Cys	Arg	Ala	Gly	His	Thr	Gly	Arg	Arg	Cys	Glu	Ser	Val
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Ile	Asn	Gly	Cys	Lys	Gly	Lys	Pro	Cys	Lys	Asn	Gly	Gly	Thr	Cys
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Ala	Val	Ala	Ser	Asn	Thr	Ala	Arg	Gly	Phe	Ile	Cys	Lys	Cys	Pro
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Ala	Gly	Phe	Glu	Gly	Ala	Thr	Cys	Glu	Asn	Asp	Ala	Arg	Thr	Cys
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Gly	Ser	Leu	Arg	Cys	Leu	Asn	Gly	Gly	Thr	Cys	Ile	Ser	Gly	Pro
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Arg	Ser	Pro	Thr	Cys	Leu	Cys	Leu	Gly	Pro	Phe	Thr	Gly	Pro	Glu
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Cys	Gln	Phe	Pro	Ala	Ser	Ser	Pro	Cys	Leu	Gly	Gly	Asn	Pro	Cys
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Tyr	Asn 1400	Gln	Gly	Thr	Cys	Glu 1405	Pro	Thr	Ser	Glu	Ser 1410	Pro	Phe	Tyr
Arg	Cys 1415	Leu	Cys	Pro	Ala	Lys 1420	Phe	Asn	Gly	Leu	Leu 1425	Cys	His	Ile
Leu	Asp 1430	Tyr	Ser	Phe	Gly	Gly 1435	Gly	Ala	Gly	Arg	Asp 1440	Ile	Pro	Pro
Pro	Leu 1445	Ile	Glu	Glu	Ala	Cys 1450	Glu	Leu	Pro	Glu	Cys 1455	Gln	Glu	Asp
Ala	Gly 1460	Asn	Lys	Val	Cys	Ser 1465	Leu	Gln	Cys	Asn	Asn 1470	His	Ala	Cys
Gly	Trp 1475	Asp	Gly	Gly	Asp	Cys 1480	Ser	Leu	Asn	Phe	Asn 1485	Asp	Pro	Trp
Lys	Asn 1490	Cys	Thr	Gln	Ser	Leu 1495	Gln	Cys	Trp	Lys	Tyr 1500	Phe	Ser	Asp
Gly	His 1505	Cys	Asp	Ser	Gln	Cys 1510	Asn	Ser	Ala	Gly	Cys 1515	Leu	Phe	Asp
Gly	Phe 1520	Asp	Cys	Gln	Arg	Ala 1525	Glu	Gly	Gln	Cys	Asn 1530	Pro	Leu	Tyr
Asp	Gln 1535	Tyr	Cys	Lys	Asp	His 1540	Phe	Ser	Asp	Gly	His 1545	Cys	Asp	Gln
Gly	Cys 1550	Asn	Ser	Ala	Glu	Cys 1555	Glu	Trp	Asp	Gly	Leu 1560	Asp	Cys	Ala
Glu	His 1565	Val	Pro	Glu	Arg	Leu 1570	Ala	Ala	Gly	Thr	Leu 1575	Val	Val	Val
Val	Leu 1580	Met	Pro	Pro	Glu	Gln 1585	Leu	Arg	Asn	Ser	Ser 1590	Phe	His	Phe
Leu	Arg 1595	Glu	Leu	Ser	Arg	Val 1600	Leu	His	Thr	Asn	Val 1605	Val	Phe	Lys
Arg	Asp 1610	Ala	His	Gly	Gln	Gln 1615	Met	Ile	Phe	Pro	Tyr 1620	Tyr	Gly	Arg
Glu	Glu 1625	Glu	Leu	Arg	Lys	His 1630	Pro	Ile	Lys	Arg	Ala 1635	Ala	Glu	Gly
Trp	Ala 1640	Ala	Pro	Asp	Ala	Leu 1645	Leu	Gly	Gln	Val	Lys 1650	Ala	Ser	Leu
Leu	Pro 1655	Gly	Gly	Ser	Glu	Gly 1660	Gly	Arg	Arg	Arg	Arg 1665	Glu	Leu	Asp
Pro	Met 1670	Asp	Val	Arg	Gly	Ser 1675	Ile	Val	Tyr	Leu	Glu 1680	Ile	Asp	Asn
Arg	Gln 1685	Cys	Val	Gln	Ala	Ser 1690	Ser	Gln	Cys	Phe	Gln 1695	Ser	Ala	Thr
Asp	Val 1700	Ala	Ala	Phe	Leu	Gly 1705	Ala	Leu	Ala	Ser	Leu 1710	Gly	Ser	Leu
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Ala	Phe	Val	Leu	Leu	Phe	Phe	Val	Gly	Cys	Gly	Val	Leu	Leu	Ser
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Ala	Val	Ile	Ser	Asp	Phe	Ile	Tyr	Gln	Gly	Ala	Ser	Leu	His	Asn
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Gln	Thr	Asp	Arg	Thr	Gly	Glu	Thr	Ala	Leu	His	Leu	Ala	Ala	Arg
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Pro	Leu	Ile	Leu	Ala	Ala	Arg	Leu	Ala	Val	Glu	Gly	Met	Leu	Glu
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Asp	Leu	Ile	Asn	Ser	His	Ala	Asp	Val	Asn	Ala	Val	Asp	Asp	Leu
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Gly	Lys	Ser	Ala	Leu	His	Trp	Ala	Ala	Ala	Val	Asn	Asn	Val	Asp
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Phe	Gln	Gln	Ser	Pro	Ser	Val	Pro	Leu	Asn	His	Leu	Pro	Gly	Met
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Pro	Asp	Thr	His	Leu	Gly	Ile	Gly	His	Leu	Asn	Val	Ala	Ala	Lys
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Pro	Glu	Met	Ala	Ala	Leu	Gly	Gly	Gly	Gly	Arg	Leu	Ala	Phe	Glu
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Thr	Gly	Pro	Pro	Arg	Leu	Ser	His	Leu	Pro	Val	Ala	Ser	Gly	Thr
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Ser	Thr	Val	Leu	Gly	Ser	Ser	Ser	Gly	Gly	Ala	Leu	Asn	Phe	Thr
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Val	Gly	Gly	Ser	Thr	Ser	Leu	Asn	Gly	Gln	Cys	Glu	Trp	Leu	Ser
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Gln	His	Gly	Met	Val	Gly	Pro	Leu	His	Ser	Ser	Leu	Ala	Ala	Ser
	2345					2350					2355			
Ala	Leu	Ser	Gln	Met	Met	Ser	Tyr	Gln	Gly	Leu	Pro	Ser	Thr	Arg
	2360					2365					2370			

Leu Ala Thr Gln Pro His Leu Val Gln Thr Gln Gln Val Gln Pro
 2375 2380 2385
 Gln Asn Leu Gln Met Gln Gln Gln Asn Leu Gln Pro Ala Asn Ile
 2390 2395 2400
 Gln Gln Gln Gln Ser Leu Gln Pro Pro Pro Pro Pro Pro Gln Pro
 2405 2410 2415
 His Leu Gly Val Ser Ser Ala Ala Ser Gly His Leu Gly Arg Ser
 2420 2425 2430
 Phe Leu Ser Gly Glu Pro Ser Gln Ala Asp Val Gln Pro Leu Gly
 2435 2440 2445
 Pro Ser Ser Leu Ala Val His Thr Ile Leu Pro Gln Glu Ser Pro
 2450 2455 2460
 Ala Leu Pro Thr Ser Leu Pro Ser Ser Leu Val Pro Pro Val Thr
 2465 2470 2475
 Ala Ala Gln Phe Leu Thr Pro Pro Ser Gln His Ser Tyr Ser Ser
 2480 2485 2490
 Pro Val Asp Asn Thr Pro Ser His Gln Leu Gln Val Pro Glu His
 2495 2500 2505
 Pro Phe Leu Thr Pro Ser Pro Glu Ser Pro Asp Gln Trp Ser Ser
 2510 2515 2520
 Ser Ser Pro His Ser Asn Val Ser Asp Trp Ser Glu Gly Val Ser
 2525 2530 2535
 Ser Pro Pro Thr Ser Met Gln Ser Gln Ile Ala Arg Ile Pro Glu
 2540 2545 2550
 Ala Phe Lys
 2555

<210> 40

<211> 2471

<212> PRT

<213> Homo sapiens

<400> 40

Met Pro Ala Leu Arg Pro Ala Leu Leu Trp Ala Leu Leu Ala Leu Trp
 1 5 10 15
 Leu Cys Cys Ala Ala Pro Ala His Ala Leu Gln Cys Arg Asp Gly Tyr
 20 25 30
 Glu Pro Cys Val Asn Glu Gly Met Cys Val Thr Tyr His Asn Gly Thr
 35 40 45
 Gly Tyr Cys Lys Cys Pro Glu Gly Phe Leu Gly Glu Tyr Cys Gln His
 50 55 60
 Arg Asp Pro Cys Glu Lys Asn Arg Cys Gln Asn Gly Gly Thr Cys Val

65	70	75	80
Ala Gln Ala Met	Leu Gly Lys Ala Thr	Cys Arg Cys Ala Ser	Gly Phe
	85	90	95
Thr Gly Glu Asp	Cys Gln Tyr Ser	Thr Ser His Pro Cys	Phe Val Ser
	100	105	110
Arg Pro Cys	Leu Asn Gly Gly	Thr Cys His Met Leu	Ser Arg Asp Thr
	115	120	125
Tyr Glu Cys	Thr Cys Gln Val	Gly Phe Thr Gly	Lys Glu Cys Gln Trp
	130	135	140
Thr Asp Ala Cys	Leu Ser His Pro Cys	Ala Asn Gly	Ser Thr Cys Thr
	145	150	155
Thr Val Ala Asn	Gln Phe Ser Cys Lys	Cys Leu Thr Gly	Phe Thr Gly
	165	170	175
Gln Lys Cys	Glu Thr Asp Val	Asn Glu Cys	Asp Ile Pro Gly His Cys
	180	185	190
Gln His Gly	Gly Thr Cys Leu	Asn Leu Pro Gly	Ser Tyr Gln Cys Gln
	195	200	205
Cys Pro Gln	Gly Phe Thr Gly	Gln Tyr Cys Asp	Ser Leu Tyr Val Pro
	210	215	220
Cys Ala Pro	Ser Pro Cys Val	Asn Gly Gly Thr	Cys Arg Gln Thr Gly
	225	230	235
Asp Phe Thr	Phe Glu Cys Asn	Cys Leu Pro Gly	Phe Glu Gly Ser Thr
	245	250	255
Cys Glu Arg	Asn Ile Asp Asp	Cys Pro Asn His	Arg Cys Gln Asn Gly
	260	265	270
Gly Val Cys	Val Asp Gly Val	Asn Thr Tyr Asn	Cys Arg Cys Pro Pro
	275	280	285
Gln Trp Thr	Gly Gln Phe Cys	Thr Glu Asp Val	Asp Glu Cys Leu Leu
	290	295	300
Gln Pro Asn	Ala Cys Gln Asn	Gly Gly Thr Cys	Ala Asn Arg Asn Gly
	305	310	315
Gly Tyr Gly	Cys Val Cys Val	Asn Gly Trp Ser	Gly Asp Asp Cys Ser
	325	330	335
Glu Asn Ile	Asp Asp Cys Ala	Phe Ala Ser Cys	Thr Pro Gly Ser Thr
	340	345	350
Cys Ile Asp	Arg Val Ala Ser	Phe Ser Cys Met	Cys Pro Glu Gly Lys
	355	360	365
Ala Gly Leu	Leu Cys His Leu	Asp Asp Ala Cys	Ile Ser Asn Pro Cys
	370	375	380
His Lys Gly	Ala Leu Cys Asp	Thr Asn Pro Leu	Asn Gly Gln Tyr Ile
	385	390	395
Cys Thr Cys	Pro Gln Gly Tyr	Lys Gly Ala Asp	Cys Thr Glu Asp Val
	405	410	415

Asp Glu Cys Ala Met Ala Asn Ser Asn Pro Cys Glu His Ala Gly Lys
 420 425 430
 Cys Val Asn Thr Asp Gly Ala Phe His Cys Glu Cys Leu Lys Gly Tyr
 435 440 445
 Ala Gly Pro Arg Cys Glu Met Asp Ile Asn Glu Cys His Ser Asp Pro
 450 455 460
 Cys Gln Asn Asp Ala Thr Cys Leu Asp Lys Ile Gly Gly Phe Thr Cys
 465 470 475 480
 Leu Cys Met Pro Gly Phe Lys Gly Val His Cys Glu Leu Glu Ile Asn
 485 490 495
 Glu Cys Gln Ser Asn Pro Cys Val Asn Asn Gly Gln Cys Val Asp Lys
 500 505 510
 Val Asn Arg Phe Gln Cys Leu Cys Pro Pro Gly Phe Thr Gly Pro Val
 515 520 525
 Cys Gln Ile Asp Ile Asp Asp Cys Ser Ser Thr Pro Cys Leu Asn Gly
 530 535 540
 Ala Lys Cys Ile Asp His Pro Asn Gly Tyr Glu Cys Gln Cys Ala Thr
 545 550 555 560
 Gly Phe Thr Gly Val Leu Cys Glu Glu Asn Ile Asp Asn Cys Asp Pro
 565 570 575
 Asp Pro Cys His His Gly Gln Cys Gln Asp Gly Ile Asp Ser Tyr Thr
 580 585 590
 Cys Ile Cys Asn Pro Gly Tyr Met Gly Ala Ile Cys Ser Asp Gln Ile
 595 600 605
 Asp Glu Cys Tyr Ser Ser Pro Cys Leu Asn Asp Gly Arg Cys Ile Asp
 610 615 620
 Leu Val Asn Gly Tyr Gln Cys Asn Cys Gln Pro Gly Thr Ser Gly Val
 625 630 635 640
 Asn Cys Glu Ile Asn Phe Asp Asp Cys Ala Ser Asn Pro Cys Ile His
 645 650 655
 Gly Ile Cys Met Asp Gly Ile Asn Arg Tyr Ser Cys Val Cys Ser Pro
 660 665 670
 Gly Phe Thr Gly Gln Arg Cys Asn Ile Asp Ile Asp Glu Cys Ala Ser
 675 680 685
 Asn Pro Cys Arg Lys Gly Ala Thr Cys Ile Asn Gly Val Asn Gly Phe
 690 695 700
 Arg Cys Ile Cys Pro Glu Gly Pro His His Pro Ser Cys Tyr Ser Gln
 705 710 715 720
 Val Asn Glu Cys Leu Ser Asn Pro Cys Ile His Gly Asn Cys Thr Gly
 725 730 735
 Gly Leu Ser Gly Tyr Lys Cys Leu Cys Asp Ala Gly Trp Val Gly Ile
 740 745 750
 Asn Cys Glu Val Asp Lys Asn Glu Cys Leu Ser Asn Pro Cys Gln Asn
 755 760 765

Gly 770 Gly Thr Cys Asp Asn 775 Leu Val Asn Gly Tyr Arg 780 Cys Thr Cys Lys
 Lys 785 Gly Phe Lys Gly Tyr 790 Asn Cys Gln Val Asn 795 Ile Asp Glu Cys Ala 800
 Ser Asn Pro Cys 805 Leu Asn Gln Gly Thr Cys 810 Phe Asp Asp Ile Ser 815 Gly
 Tyr Thr Cys 820 His Cys Val Leu Pro Tyr 825 Thr Gly Lys Asn Cys 830 Gln Thr
 Val Leu 835 Ala Pro Cys Ser Pro 840 Asn Pro Cys Glu Asn 845 Ala Ala Val Cys
 Lys 850 Glu Ser Pro Asn Phe 855 Glu Ser Tyr Thr Cys 860 Leu Cys Ala Pro Gly
 Trp 865 Gln Gly Gln Arg Cys 870 Thr Ile Asp Ile Asp 875 Glu Cys Ile Ser Lys 880
 Pro Cys Met Asn 885 His Gly Leu Cys His 890 Asn Thr Gln Gly Ser Tyr Met 895
 Cys Glu Cys 900 Pro Gly Phe Ser 905 Gly Met Asp Cys Glu 910 Glu Asp Ile
 Asp Asp Cys 915 Leu Ala Asn Pro Cys 920 Gln Asn Gly Gly Ser 925 Cys Met Asp
 Gly 930 Val Asn Thr Phe Ser 935 Cys Leu Cys Leu Pro 940 Gly Phe Thr Gly Asp
 Lys 945 Cys Gln Thr Asp Met 950 Asn Glu Cys Leu Ser 955 Glu Pro Cys Lys Asn 960
 Gly Gly Thr Cys 965 Ser Asp Tyr Val Asn 970 Ser Tyr Thr Cys Lys Cys 975 Gln
 Ala Gly Phe Asp 980 Gly Val His Cys 985 Glu Asn Asn Ile Asn 990 Glu Cys Thr
 Glu Ser 995 Ser Cys Phe Asn Gly Gly 1000 Thr Cys Val Asp Gly 1005 Ile Asn Ser
 Phe Ser 1010 Cys Leu Cys Pro Val 1015 Gly Phe Thr Gly Ser 1020 Phe Cys Leu
 His Glu 1025 Ile Asn Glu Cys Ser 1030 Ser His Pro Cys 1035 Leu Asn Glu Gly
 Thr Cys 1040 Val Asp Gly Leu Gly 1045 Thr Tyr Arg Cys Ser 1050 Cys Pro Leu
 Gly Tyr 1055 Thr Gly Lys Asn Cys 1060 Gln Thr Leu Val Asn 1065 Leu Cys Ser
 Arg Ser 1070 Pro Cys Lys Asn Lys 1075 Gly Thr Cys Val Gln 1080 Lys Lys Ala
 Glu Ser 1085 Gln Cys Leu Cys Pro 1090 Ser Gly Trp Ala Gly 1095 Ala Tyr Cys
 Asp Val Pro Asn Val Ser Cys Asp Ile Ala Ala Ser Arg Arg Gly

1100	1105	1110
Val Leu 1115	Val Glu His Leu Cys 1120	Val Cys Ile Asn 1125
Ala Gly 1130	Asn Thr His Tyr Cys 1135	Gly Tyr Thr Gly 1140
Ser Tyr 1145	Cys Glu Glu Gln Leu 1150	Ser Asn Pro Cys 1155
Gln His 1160	Gly Ala Thr Cys Ser 1165	Gly Tyr Arg Cys 1170
Glu Cys 1175	Val Pro Gly Tyr Gln 1180	Glu Tyr Glu Val 1185
Asp Glu 1190	Cys Gln Asn Gln Pro 1195	Gly Thr Cys Ile 1200
Asp Leu 1205	Val Asn His Phe Lys 1210	Pro Gly Thr Arg 1215
Gly Leu 1220	Leu Cys Glu Glu Asn 1225	Ile Asp Asp Cys Ala 1230
His Cys 1235	Leu Asn Gly Gly Gln 1240	Cys Met Asp Arg Ile 1245
Ser Cys 1250	Arg Cys Leu Pro Gly 1255	Phe Ala Gly Glu Arg 1260
Asp Ile 1265	Asn Glu Cys Leu Ser 1270	Asn Pro Cys Ser Ser 1275
Leu Asp 1280	Cys Ile Gln Leu Thr 1285	Asn Asp Tyr Leu Cys 1290
Ser Ala 1295	Phe Thr Gly Arg His 1300	Cys Glu Thr Phe Val 1305
Pro Gln 1310	Met Pro Cys Leu Asn 1315	Gly Gly Thr Cys Ala 1320
Asn Met 1325	Pro Asp Gly Phe Ile 1330	Cys Arg Cys Pro Pro 1335
Gly Ala 1340	Arg Cys Gln Ser Ser 1345	Cys Gly Gln Val Lys 1350
Gly Glu 1355	Gln Cys Val His Thr 1360	Ala Ser Gly Pro Arg 1365
Pro Ser 1370	Pro Arg Asp Cys Glu 1375	Ser Gly Cys Ala Ser 1380
Gln His 1385	Gly Gly Ser Cys His 1390	Pro Gln Arg Gln Pro 1395
Ser Cys 1400	Gln Cys Ala Pro Pro 1405	Phe Ser Gly Ser Arg 1410
Tyr Thr 1415	Ala Pro Pro Ser Thr 1420	Pro Pro Ala Thr Cys 1425

Tyr	Cys	Ala	Asp	Lys	Ala	Arg	Asp	Gly	Val	Cys	Asp	Glu	Ala	Cys
	1430					1435					1440			
Asn	Ser	His	Ala	Cys	Gln	Trp	Asp	Gly	Gly	Asp	Cys	Ser	Leu	Thr
	1445					1450					1455			
Met	Glu	Asn	Pro	Trp	Ala	Asn	Cys	Ser	Ser	Pro	Leu	Pro	Cys	Trp
	1460					1465					1470			
Asp	Tyr	Ile	Asn	Asn	Gln	Cys	Asp	Glu	Leu	Cys	Asn	Thr	Val	Glu
	1475					1480					1485			
Cys	Leu	Phe	Asp	Asn	Phe	Glu	Cys	Gln	Gly	Asn	Ser	Lys	Thr	Cys
	1490					1495					1500			
Lys	Tyr	Asp	Lys	Tyr	Cys	Ala	Asp	His	Phe	Lys	Asp	Asn	His	Cys
	1505					1510					1515			
Asn	Gln	Gly	Cys	Asn	Ser	Glu	Glu	Cys	Gly	Trp	Asp	Gly	Leu	Asp
	1520					1525					1530			
Cys	Ala	Ala	Asp	Gln	Pro	Glu	Asn	Leu	Ala	Glu	Gly	Thr	Leu	Val
	1535					1540					1545			
Ile	Val	Val	Leu	Met	Pro	Pro	Glu	Gln	Leu	Leu	Gln	Asp	Ala	Arg
	1550					1555					1560			
Ser	Phe	Leu	Arg	Ala	Leu	Gly	Thr	Leu	Leu	His	Thr	Asn	Leu	Arg
	1565					1570					1575			
Ile	Lys	Arg	Asp	Ser	Gln	Gly	Glu	Leu	Met	Val	Tyr	Pro	Tyr	Tyr
	1580					1585					1590			
Gly	Glu	Lys	Ser	Ala	Ala	Met	Lys	Lys	Gln	Arg	Met	Thr	Arg	Arg
	1595					1600					1605			
Ser	Leu	Pro	Gly	Glu	Gln	Glu	Gln	Glu	Val	Ala	Gly	Ser	Lys	Val
	1610					1615					1620			
Phe	Leu	Glu	Ile	Asp	Asn	Arg	Gln	Cys	Val	Gln	Asp	Ser	Asp	His
	1625					1630					1635			
Cys	Phe	Lys	Asn	Thr	Asp	Ala	Ala	Ala	Ala	Leu	Leu	Ala	Ser	His
	1640					1645					1650			
Ala	Ile	Gln	Gly	Thr	Leu	Ser	Tyr	Pro	Leu	Val	Ser	Val	Val	Ser
	1655					1660					1665			
Glu	Ser	Leu	Thr	Pro	Glu	Arg	Thr	Gln	Leu	Leu	Tyr	Leu	Leu	Ala
	1670					1675					1680			
Val	Ala	Val	Val	Ile	Ile	Leu	Phe	Ile	Ile	Leu	Leu	Gly	Val	Ile
	1685					1690					1695			
Met	Ala	Lys	Arg	Lys	Arg	Lys	His	Gly	Ser	Leu	Trp	Leu	Pro	Glu
	1700					1705					1710			
Gly	Phe	Thr	Leu	Arg	Arg	Asp	Ala	Ser	Asn	His	Lys	Arg	Arg	Glu
	1715					1720					1725			
Pro	Val	Gly	Gln	Asp	Ala	Val	Gly	Leu	Lys	Asn	Leu	Ser	Val	Gln
	1730					1735					1740			
Val	Ser	Glu	Ala	Asn	Leu	Ile	Gly	Thr	Gly	Thr	Ser	Glu	His	Trp
	1745					1750					1755			

Val	Asp 1760	Asp	Glu	Gly	Pro	Gln 1765	Pro	Lys	Lys	Val	Lys 1770	Ala	Glu	Asp
Glu	Ala 1775	Leu	Leu	Ser	Glu	Glu 1780	Asp	Asp	Pro	Ile	Asp 1785	Arg	Arg	Pro
Trp	Thr 1790	Gln	Gln	His	Leu	Glu 1795	Ala	Ala	Asp	Ile	Arg 1800	Arg	Thr	Pro
Ser	Leu 1805	Ala	Leu	Thr	Pro	Pro 1810	Gln	Ala	Glu	Gln	Glu 1815	Val	Asp	Val
Leu	Asp 1820	Val	Asn	Val	Arg	Gly 1825	Pro	Asp	Gly	Cys	Thr 1830	Pro	Leu	Met
Leu	Ala 1835	Ser	Leu	Arg	Gly	Gly 1840	Ser	Ser	Asp	Leu	Ser 1845	Asp	Glu	Asp
Glu	Asp 1850	Ala	Glu	Asp	Ser	Ser 1855	Ala	Asn	Ile	Ile	Thr 1860	Asp	Leu	Val
Tyr	Gln 1865	Gly	Ala	Ser	Leu	Gln 1870	Ala	Gln	Thr	Asp	Arg 1875	Thr	Gly	Glu
Met	Ala 1880	Leu	His	Leu	Ala	Ala 1885	Arg	Tyr	Ser	Arg	Ala 1890	Asp	Ala	Ala
Lys	Arg 1895	Leu	Leu	Asp	Ala	Gly 1900	Ala	Asp	Ala	Asn	Ala 1905	Gln	Asp	Asn
Met	Gly 1910	Arg	Cys	Pro	Leu	His 1915	Ala	Ala	Val	Ala	Ala 1920	Asp	Ala	Gln
Gly	Val 1925	Phe	Gln	Ile	Leu	Ile 1930	Arg	Asn	Arg	Val	Thr 1935	Asp	Leu	Asp
Ala	Arg 1940	Met	Asn	Asp	Gly	Thr 1945	Thr	Pro	Leu	Ile	Leu 1950	Ala	Ala	Arg
Leu	Ala 1955	Val	Glu	Gly	Met	Val 1960	Ala	Glu	Leu	Ile	Asn 1965	Cys	Gln	Ala
Asp	Val 1970	Asn	Ala	Val	Asp	Asp 1975	His	Gly	Lys	Ser	Ala 1980	Leu	His	Trp
Ala	Ala 1985	Ala	Val	Asn	Asn	Val 1990	Glu	Ala	Thr	Leu	Leu 1995	Leu	Leu	Lys
Asn	Gly 2000	Ala	Asn	Arg	Asp	Met 2005	Gln	Asp	Asn	Lys	Glu 2010	Glu	Thr	Pro
Leu	Phe 2015	Leu	Ala	Ala	Arg	Glu 2020	Gly	Ser	Tyr	Glu	Ala 2025	Ala	Lys	Ile
Leu	Leu 2030	Asp	His	Phe	Ala	Asn 2035	Arg	Asp	Ile	Thr	Asp 2040	His	Met	Asp
Arg	Leu 2045	Pro	Arg	Asp	Val	Ala 2050	Arg	Asp	Arg	Met	His 2055	His	Asp	Ile
Val	Arg 2060	Leu	Leu	Asp	Glu	Tyr 2065	Asn	Val	Thr	Pro	Ser 2070	Pro	Pro	Gly
Thr	Val	Leu	Thr	Ser	Ala	Leu	Ser	Pro	Val	Ile	Cys	Gly	Pro	Asn

2075					2080					2085				
Arg	Ser	Phe	Leu	Ser	Leu	Lys	His	Thr	Pro	Met	Gly	Lys	Lys	Ser
2090						2095					2100			
Arg	Arg	Pro	Ser	Ala	Lys	Ser	Thr	Met	Pro	Thr	Ser	Leu	Pro	Asn
2105						2110					2115			
Leu	Ala	Lys	Glu	Ala	Lys	Asp	Ala	Lys	Gly	Ser	Arg	Arg	Lys	Lys
2120						2125					2130			
Ser	Leu	Ser	Glu	Lys	Val	Gln	Leu	Ser	Glu	Ser	Ser	Val	Thr	Leu
2135						2140					2145			
Ser	Pro	Val	Asp	Ser	Leu	Glu	Ser	Pro	His	Thr	Tyr	Val	Ser	Asp
2150						2155					2160			
Thr	Thr	Ser	Ser	Pro	Met	Ile	Thr	Ser	Pro	Gly	Ile	Leu	Gln	Ala
2165						2170					2175			
Ser	Pro	Asn	Pro	Met	Leu	Ala	Thr	Ala	Ala	Pro	Pro	Ala	Pro	Val
2180						2185					2190			
His	Ala	Gln	His	Ala	Leu	Ser	Phe	Ser	Asn	Leu	His	Glu	Met	Gln
2195						2200					2205			
Pro	Leu	Ala	His	Gly	Ala	Ser	Thr	Val	Leu	Pro	Ser	Val	Ser	Gln
2210						2215					2220			
Leu	Leu	Ser	His	His	His	Ile	Val	Ser	Pro	Gly	Ser	Gly	Ser	Ala
2225						2230					2235			
Gly	Ser	Leu	Ser	Arg	Leu	His	Pro	Val	Pro	Val	Pro	Ala	Asp	Trp
2240						2245					2250			
Met	Asn	Arg	Met	Glu	Val	Asn	Glu	Thr	Gln	Tyr	Asn	Glu	Met	Phe
2255						2260					2265			
Gly	Met	Val	Leu	Ala	Pro	Ala	Glu	Gly	Thr	His	Pro	Gly	Ile	Ala
2270						2275					2280			
Pro	Gln	Ser	Arg	Pro	Pro	Glu	Gly	Lys	His	Ile	Thr	Thr	Pro	Arg
2285						2290					2295			
Glu	Pro	Leu	Pro	Pro	Ile	Val	Thr	Phe	Gln	Leu	Ile	Pro	Lys	Gly
2300						2305					2310			
Ser	Ile	Ala	Gln	Pro	Ala	Gly	Ala	Pro	Gln	Pro	Gln	Ser	Thr	Cys
2315						2320					2325			
Pro	Pro	Ala	Val	Ala	Gly	Pro	Leu	Pro	Thr	Met	Tyr	Gln	Ile	Pro
2330						2335					2340			
Glu	Met	Ala	Arg	Leu	Pro	Ser	Val	Ala	Phe	Pro	Thr	Ala	Met	Met
2345						2350					2355			
Pro	Gln	Gln	Asp	Gly	Gln	Val	Ala	Gln	Thr	Ile	Leu	Pro	Ala	Tyr
2360						2365					2370			
His	Pro	Phe	Pro	Ala	Ser	Val	Gly	Lys	Tyr	Pro	Thr	Pro	Pro	Ser
2375						2380					2385			
Gln	His	Ser	Tyr	Ala	Ser	Ser	Asn	Ala	Ala	Glu	Arg	Thr	Pro	Ser
2390						2395					2400			

His	Ser	Gly	His	Leu	Gln	Gly	Glu	His	Pro	Tyr	Leu	Thr	Pro	Ser
	2405					2410					2415			
Pro	Glu	Ser	Pro	Asp	Gln	Trp	Ser	Ser	Ser	Ser	Pro	His	Ser	Ala
	2420					2425					2430			
Ser	Asp	Trp	Ser	Asp	Val	Thr	Thr	Ser	Pro	Thr	Pro	Gly	Gly	Ala
	2435					2440					2445			
Gly	Gly	Gly	Gln	Arg	Gly	Pro	Gly	Thr	His	Met	Ser	Glu	Pro	Pro
	2450					2455					2460			
His	Asn	Asn	Met	Gln	Val	Tyr	Ala							
	2465					2470								